LONG EATON
Urban District Council.

— TWELFTH —

ANNUAL REPORT

OF THE

Medical Officer of Health

AND

Inspector of Nuisances,

For 1898.

By ANTONY B. CHAMBERS, M.D.

January 17th, 1899.

LONG EATON

Urban District Council, 1898.

Chairman :

SAMUEL BUTLER, Esq., J.P.

Vice-Chairman :

JAMES WINFIELD, Jun., Esq.,

Members :

COUNCILLOR ERNEST R. RIDGWAY.
" FRANK R. CLAYE.
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" HERBERT HARRIMAN.

Clerk :—E. WILLIAMS, Esq.

Medical Officer of Health :—A. B. CHAMBERS, Esq., M.D.

Surveyor :—FRANK WORRALL, Esq., C.E.

Rate Collector :—MR. JOHN SMITH.

LONG EATON URBAN DISTRICT COUNCIL.

Area in Acres - - - - -	**2099.**
Population last Census - -	**9636.**
Estimated Population to the middle of the year, 1898 - -	**12,400.**
Inhabited Houses - - - -	**2476.**

Annual Report of Medical Officer of Health for 1898.

MR. CHAIRMAN AND GENTLEMEN.

I beg to submit my Twelfth Annual Report.

VITAL STATISTICS.

BIRTHS—There were 358 births registered during the year; 181 males, and 177 females, against 366 last year, giving a birth rate per 1000 per annum of 28.9; against 31·18 last year. Excess of birth rate over death rate, 17. Although the population increases, the birth rate does not increase in the same proportion.

I beg to call your attention to the following table of figures which give the number of births and deaths since the last census, 1891.

POPULATION 9,636.

YEAR.	BIRTHS.	DEATHS.
1891	318	136
1892	314	169
1893	385	166
1894	351	127
1895	366	122
1896	346	117
1897	366	153
1898	258	148
Total ..	2704	1138

Average for the eight years—births 351; deaths 142·6.

The births are above the average, and the deaths just above for the eight years.

Deaths.—There were 148 deaths registered during the year. 5 less than last year, against 117 the year before. Estimating the population at 12,400 would give a death rate of 11·9 per 1000 per annum, which shows a very good general death rate for so large a district.

Of these 148 deaths 4 were from Scarlet Fever; 4 from Diphtheria; 3 Croup; 2 Typhoid Fever; 3 Measles; 7 Diarrhœa: 14 Phthisis; 21 Bronchitis; Pleurisy and Pneumonia; 2 Influenza; and 71 all other diseases. There were three inquests held during the year, and one death from drowning at Trent Lock. At an inquest held there, I was requested by the Coroner to bring before the notice of the Council the fact that there was no life-saving apparatus of any kind at Trent Lock.

In case of an accident, very little help could be given to a drowning person. I would suggest that the Council communicate with the Trent Navigation Company, pointing out to them the danger and the risk there was, and probably they would provide some life-belts and anything else necessary, and some ambulance instruction in first aid given to some resident official of the Company.

The causes of mortality will be seen from the following table :—

NAME OF DISEASE.				
Small Pox	(under 5 yrs.)	0	(over 5 yrs.)	0
Scarlet Fever	,,	2	,,	2
Diptheria	,,	3	,,	1
Memb. Croup	,,	3	,,	0
Typhus	,,	0	,,	0
Typhoid	,,	0	,,	2
Continued	,,	0	,,	0
Relapsing	,,	0	,,	0
Puerperal	,,	0	,,	0
Cholera	,,	0	,,	0
Erysipelas	,,	0	,,	6
Measles	,,	3	,,	0
Whooping Cough	,,	0	,,	0
Diarrhœa	,,	7	,,	0
Rheumatic Fever	,,	0	,,	0
Phthisis	,,	0	,,	14
Bronchitis, Pleurisy and Pneumonia	,,	9	,,	12
Heart Disease	,,	1	,,	16
Influenza	,,	0	,,	9
Injuries	,,	0	,,	0
All Other Diseases	,,	12	,,	29
		70		91

Total for 1898 161

These figures should be compared with those of the previous eight years since the last census.

	CAUSES.	1891	1892	1893	1894	1895	1896	1897	1898
	Small Pox	0	0	1	6	0	0	0	0
	Scarlet Fever	0	2	8	7	1	0	0	4
	Diphtheria	1	3	0	2	0	0	3	4
	Memb Croup	2	0	0	2	1	0	0	3
Fevers.	Typhus	0	0	0	0	0	0	0	0
	Typhoid	0	2	3	0	1	3	4	2
	Continued	0	0	0	0	0	0	0	0
	Relapsing	0	0	0	0	0	0	0	0
	Puerperal	3	1	2	1	0	0	0	0
	Cholera	0	0	0	0	0	0	0	0
	Erysipelas	1	0	2	1	0	0	1	0
	Measles	0	15	0	0	11	1	0	3
	Whooping Cough	0	1	10	5	1	0	3	0
	Diarrhœa	2	1	5	2	5	2	14	7
	Rheumatic Fever	0	1	0	0	0	1	0	0
	Phthisis	17	19	12	10	13	6	15	14
	Pleuresy	18	45	24	14	38	19	25	21
	Heart Disease	15	8	10	9	4	4	14	17
	Influenza	0	0	0	0	1	0	0	2
	Injuries	5	3	9	4	2	7	4	0
	Other Diseases	74	66	80	79	45	74	70	71
	Totals	138	167	166	142	123	117	153	148

The following table shows the deaths from the seven principal Zymotic Diseases—

	1891	1892	1893	1894	1895	1896	1897	1898
Small Pox	0	0	1	0	0	0	0	0
Measles	0	15	0	0	11	1	0	3
Scarlet Fever	0	2	8	7	1	0	0	4
Diphtheria	1	3	0	2	0	0	3	3
Whooping Cough	1	3	10	5	1	0	3	0
Typhoid	0	2	3	0	1	3	4	2
Diarrhœa	2	1	5	2	5	1	14	7
Totals	4	26	27	16	19	5	24	19

Gen. Death Rate	14·42	16·61	15·61	11·5	10·16	10·37	13·01	11·9
Zymotic Rate,	0·4	2·45	2·54	0·2	1·5	0·4	2·1	1·06

Table showing No. of Infectious Diseases reported since 1891.—

	1891	1892	1893	1894	1895	1896	1897	1898
Small Pox	0	0	5	0	9	0	0	0
Diphtheria	13	16	5	4	8	9	14	12
Croup	0	1	2	5	6	2	0	5
Erysipelas	8	27	24	19	10	19	21	21
Typhoid	13	2	23	4	5	21	44	16
Puerperal	2	2	1	1	0	1	0	2
Whooping Cough	15	91	0	39	91	0	0	0
Measles	13	560	4	8	67	0	0	0
Chicken Pox	0	0	0	0	0	0	33	10
Scarlet Fever	4	28	145	157	45	25	39	80
Total	168	737	209	237	241	77	151	146

Total for 8 years, 1864. **Average for ditto, 233.**

It will be seen in examining the last two tables that both the General Death Rate and the Zymotic Death Rate are very low indeed, and both within the average, which speaks well for the sanitary condition of the district during the year.

ANALYSIS OF THE CAUSES OF DEATH.

SMALL POX.—I am pleased to be able to report that there has not been any case of Small Pox notified during the year. As there are a great many children in the district unvaccinated, the risk of infection and spread of Small Pox increases yearly, while the present means of isolation are inadequate to meet any sudden outbreak should one arise. For while our friends who do not believe in vaccination, and other modern means for checking the spread of Small Pox, and who refuse to have their children vaccinated, exposing their vaccinated neighbours to greater risk of catching small pox, take no steps to provide any scheme of their own or make any suggestion as to a better means—and content themselves with simply finding fault with vaccination, adding to the difficulty, instead of helping to solve the problem. To those who do not believe in vaccination, and there must be a large number in the district, judging from the number of children that are unvaccinated, I would suggest that they all join together, and build themselves a large Isolation Hospital, and maintain it at their own expense, where they would be able to isolate all the cases of small pox caused by their neglect in not carying out the remedy which both experience and science have proved to be the proper means for checking the spread of small pox. They would then find out to their cost that the remedy, improved sanitary conditions which they talk about so much at present, would not only not stop the ravages of an epidemic of small pox, but would carry them away with it—ruined with expense, and not have the satisfaction of stamping out the disease into the bargain. Instead of doing this they leave to their vaccinated neighbours to build Hospitals and go to the expense of adopting other useless means, while the thorough vaccination of the children would have met the case—and up to the present the only known remedy for small pox. I am confident that if the public were a little more educated in the real knowledge of the theory of vaccination, in regard to its effects in modifying the attacks and checking the progress of the disease, there would be much less difficulty in carrying out the Vaccination laws than there is at present. It is accurate knowledge of the subject that the public require, and not Acts of Parliament, which oftimes put more difficulties in the way, rather than help to remove the prejudices against vaccination. Parents require a better knowledge of the treatment of the child's arm after vaccination has taken place than they possess at present. Many of the complaints that are made about vaccination are caused by the introduction of foreign matter into the wound which sets up septic inflammation, causing Erysipelas, by the using of a dirty sponge, or other material that had been used to wash the rest of the child's body. It is not very encouraging to a mother to find Erysipelas in her child's arm from shoulder to finger tips, blaming the vaccination, when all the time the mischief has been done by the admittance of foreign matter into the wound from uncleanly and unhealthy surroundings. Once this condition of inflammation in the arm has been set up, no amount of argument will ever persuade a parent that all the trouble has not been caused by some poison in the vaccination itself.

I would therefore suggest at the time of vaccination, that the parents be supplied with some simple printed instructions as to the proper treatment of the child's arm after the eighth day, and pointing out the risks from infection from outside, and any other information the vaccinator may think necessary in each case.

The following table shows the number of births registered in the district since 1891, and the number of children vaccinated :—

YEAR.	BIRTHS.	VACCINATED	UNVACCINATED
1891	318	266	52
1892	314	246	73
1893	385	263	122
1894	351	182	169
1895	366	148	218
1896	346	120	226
1897	366	53	313
1898	358	28	330
Total ...	2804	1306	1503

Scarlet Fever.—There were 80 cases of Scarlet Fever notified during the year by the medical attendants. There were no reports sent in by parents, where medical advice was not sought, and there must have been a good number of these, as the attack was of a mild type. There were four deaths. The cases were of a mild type, and except in a few instances, no local unsanitary condition could be traced. The Schools, both day and Sunday, appear to be the great means of spreading the disease. We have no Isolation Hospital, and therefore have no control over the disease, except by keeping the children away from school when the disease is found out; but it is too late then, as one case at school will infect dozens of children, and especially if there are children with a mild attack, and parents do not think it necessary to keep them at home; the child goes on to peeling and spreading the disease daily. In small districts where isolation hospitals are not available, proper control over the infectious diseases of children, such as Measles, Whooping Cough, Scarlet Fever, Diphtheria, Membranous Croup, Chicken Pox, is impossible until the time arrives when the School Boards in these small districts appoint a Medical Officer to visit the Schools daily, and examine any suspicious cases that the teachers might draw his attention to; such as Rashes, Sore Throats, Feverish Conditions, he could then send the child immediately home, and prevent its return until it was free from infection. This is the first step that must be taken to prevent the disease spreading in the schools.

It would be a great saving to the ratepayers, as it would lessen the expenses of notification by preventing the disease spreading. At the same time the Medical Officer could attend to any defects of sight in the children, and defects in hearing. Many children are classed as deficient in intelligence, whereas they are defective in hearing powers instead, often from such simple causes as wax in the ear—Eustachian deafness left after sore throat, all of which could easily be remedied. The Medical Officer could also give certificates to the School Board of the causes of non-attendance of children, and generally advise the Board on all matters affecting the health of the children from a sanitary point.

I am pleased to say that we have had no recurrence of Scarlet Fever in any of the houses after the rooms had been properly disinfected under the supervision and instructions of the Sanitary Inspector. If we had more control in the schools as we have in the houses, a great deal more could be done to check the spread of these preventable diseases.

The following table of figures shows the number of children attending the day schools in Long Eaton:—

Sawley Road Board Schools	—Mixed, 475.		Infants, 261.	Total, 777.
	Science and Art Class, 41.			
Derby Road Board Schools	—Boys, 243.	Girls, 224.	Infants, 281.	Total, 748.
High Street Board Schools	—Boys, 191.	Girls, 177.	Infants, 195.	Total, 563.
National Schools ...	—Mixed, 336.	...	Infants, 169.	Total, 505.
Private Day Schools	... ...	...	... ...	... 100.
	Total attending Day Schools		...	... 2693.

From these figures will be seen the great number of children that huddle together during the day, and the great facility there is for spreading infectious diseases.

DIPHTHERIA.—Twelve cases of Diphtheria were reported, and four deaths. Most of the cases were of a mild character. When visited, some were found to be caused by local sanitary defects with drainage, some polluted well-water, and in others no sanitary cause could be traced; climatic and soil impurities were probably the cause in others. Where sanitary defects were found, the matters were reported immediately, and instructions given to remedy the defects.

It is pleasing to record that this year we have had no difficulty in getting any unsanitary conditions attended to, when brought to the notice of the owners; and it speaks well for the sanitary progress of the town, that the people themselves take an appreciative and interested view of sanitary matters, and now willingly comply with orders that a few years ago would have been looked upon with anything but favour.

MEMBRANOUS CROUP.—There were five cases reported.

TYPHOID FEVER.—There were 16 cases reported and two deaths, 28 cases less than last year. One of the deaths was a most respected member of the Council, and although a new member, he took great interest in all sanitary matters. We could not find any local cause for the fever, and it was surmised at the time that he caught the infection elsewhere.

The other death was also a respected townsman, and a candidate for the District Council. He caught the infection at home. The house in which he lived was a new house ; water has been found in the cellar from time to time, and doubtless polluted air from the site on which the house was built must have found its way into the rooms. With damp cellar and damp pantry, food and milk might easily have been polluted by foul air from decomposing vegetable matter. As a sanitary precaution, I would advise that all houses built in low damp, and made sites, especially where refuse has been thrown, that 6 inches of concrete be placed where the house is to be built on, and thereby prevent the entrance of foul gases into the rooms afterwards.

All the cases were reported in July, August, and September—we have scarcely any cases occurring at any other time of the year,—and I have noticed the same occurring in other years, and especially if a hot dry summer is succeeded by heavy rain in the autumn.

The first case reported was in Bonsall's Row. I found this row of houses all supplied with one pump, and on examining the water, it was found to be polluted by sewage from a neighbouring drain that leaked into it. The water was condemned and an order made to close the well. The town water was put in, the drains put in proper repair, and the whole row put into a proper sanitary condition. Five more cases occurred in the row, all from the same cause. There has been no illness reported there since the town water has been laid in.

Sept. 2nd.—Trafalgar Terrace. No local cause found.

Sept. 13th.—14, Station Street. Well water examined and found to be polluted. Well closed and town water laid in.

Sept. 16th.—16, New Tithe Street. Well water condemned and town water laid in.

Sept. 17th.—1, Peel Street. No local cause could be found except house being dirty and required cleaning.

Nov. 25th.—Victoria Terrace. No local cause.

Most of the cases of Typhoid Fever occur in the older portion of the town year after year, where polluted well water is still to be found. When all the pumps in the district are closed, we shall hear less of Typhoid Fever, but not before ; there are even now cases to be found where people who have the town water laid in will not use it for drinking purposes, but prefer to drink pump water instead, and if they get Typhoid Fever as a result, have all kinds of explanations to make, except the right one.

PUERPERAL FEVER.—Two cases of Puerperal Fever were notified, and in each case, the Nurse in attendance was prevented from attending other confinements until certified by the Doctor in attendance that she was free from infection.

ERYSIPELAS.—There were 21 cases of Erysipelas reported. They were all of a very mild character, and no death occurred. Sanitary defects were found in some places, in others none could be found.

CHICKEN-POX.—There were 10 cases of Chicken-Pox reported. Eight were over five years of age and two under. Examination was made of each case for suspected Small-Pox.

DIARRHŒA.—There were 7 cases of death reported, all amongst children, probably from improper feeding.

PHTHISIS.—There were 14 deaths from Phthisis, but I cannot say whether any were due to milk or meat with Tubercular taint. We have no control whatever over the milk supply of the town. All the milk sellers ought to be registered for the purpose of enquiries being made from time to time.

TOWN WATER.—There are 2,200 houses now supplied with Town Water, 276 houses still remain supplied with Pump Water. A good number of samples of Well Water were examined by me during the year, and where found to be polluted, were condemned; the wells ordered to be closed, and the town water laid in. The number of wells have been reduced, since last year, from 421 to 276, and I hope by another year all the pump water in the district will be condemned for drinking purposes.

Several samples of the Town Water have been submitted to the County Analyst for examination, and his reports were always of a satisfactory character.

The weekly pumping at the well amounts to about 1,600,000 gallons.

TOWN DRAINAGE.—The Drainage of the Town received a good deal of attention during the year. The sewer in Gibb Street was taken up and laid again, as it was found blocked with sewage, There has been fewer complaints, this year, of smells from the drains and man-holes; the sewers are regularly flushed, ventilating shafts have been put up where found necessary, and the man-holes have trays of disinfectants in each, which considerably minimises the smells complained of in former years. A great deal of sanitary work has been done during the year; road-making, scavenging, and night-soil work—now done by the Council's men,—more particular details of which will be found in the Surveyor's Report.

BAKE-HOUSES & SLAUGHTER-HOUSES.—All the Bake-Houses and Slaughter-Houses in the district were visited and found to be clean and well whitewashed.

MEAT STALLS were visited, but no bad or diseased meat were found. One instance, in which a pig was killed and found dressed, was reported by the owner, and was buried.

OVER-CROWDING.—No cases have come to our knowledge during the year.

COMMON LODGING-HOUSE.—There is only one Lodging-House in the district, and it is under the supervision of the Police. I have had no complaints made, and there has been no case of sickness there during the year.

Surveyor's Report.

Summary of Sanitary Work done in the Inspector of Nuisances' Department during the year 1898, in the Derbyshire portion of the Urban Sanitary District of Long Eaton :—

		Inspections and Observations made.	Informal Notices served by Inspector.	Legal Notices by Authority.	Nuisances Abated after Notice.
Dwelling Houses and Schools.	Foul Conditions				
	Structural Defects ...				
	Overcrowding				
	Unfit for Habitation ...	1	1		1
	Lodging Houses				
	Dairies and Milkshops ...				
	Cow Sheds				
	Bakehouses...	14			
	Slaughter-houses	13			
	Canal Boats				
	Ashpits and Privies ...	11	11		9
	Deposits of Refuse and Manure	4	4		4
	Water Closets	1	1		1
House Drainage	Defective Traps	9	9		9
	No Disconnection				
	Other Faults	15	15		15
	Water Supply	41	41		40
	Pigsties	4	4		4
	Animals improperly kept	2	2		
	Offensive Trades				
	Smoke Nuisances	14	14		0
	Other Nuisances	8	8		8
	Totals	137	110		91

PRECAUTIONS AGAINST INFECTIOUS DISEASE.

Lots of Infected Bedding Stoved or Destroyed	after each case of Infectious Disease.
Houses Disinfected after Infectious Disease	After each case of infectious Disease.
Schools ,, ,, ,, ,,	
Method of Disinfection adopted ...	Sulphur Fumigation.
Prosecutions for not Notifying Existance of Infectious Disease ...	
Convictions ,, ,, ,,	
Prosecutions for Exposure of Infected Persons or Things ...	
Convictions ,, ,, ,,	

Has Infectious Diseases Prevention Act, 1890, been adopted ? ...	Yes.
Has Public Health Amendment Act, 1890, been adopted ? ...	Yes.

Paving of streets, Cleaning out all sewers which has considerably lessened the number of complaints of foul emanations from the man-holes.

Several ventilation shafts have been erected, and it is intended to proceed with the system of ventilation.

EXPERIMENTAL.

Three filter-beds have been constrncted at the sewage farm, each having an area of about 38 yards, composed respectively of, No. 1—gravel, various sizes of coke-breeze and sand ; No. 2—gravel, various sizes of coal and sand ; No. 3—gravel, various sizes of Stanton clay chippings and sand, all of which are effecting a great improvement in sewage effluent. Samples of filtrate from Nos. 1 & 2 are as have been aubmitted to the County Analyist, and taking the organic ammonia as a standard purity, a percentage of purification equal to 67 per cent. in No. 1, and 63 per cent. in No. 2, was produced on the tank effluent after chemical precipitation only.

County Analyist's Report.

	Parts per 100,000.		
	No. 1.	No. 2.	No. 3.
Total Solid Matter	97·0	107·0	84·0
Free and Saline Ammonia ...	1·443	1·039	2.980
Organic Ammonia	0·075-67 p.c.	0·085-67 p.c.	0·230
Nitrogen as Nitrates and Nitrites	1·98	2·31	0·0
Total Combined Nitrogen ...	——	——	——
Chlorine as Chlorides	11·3	14·0	10·1
Hardness { Temporary			
Hardness { Permanent			
Hardness { Total	61%	56·56%	
Oxygen absorbed in four hours at 80° Fahr.	0.542	0·593	1·135
Appearance in 2 ft. Tube ...			
Microscopal Examination ...			
Alkalinity as Carbonate of Lime	16·0	21·0	36·0

Special Sanitary Requirements for the District.

1.—The substitution of Water-closets for Pans in all new houses where the sewers are in a good condition.

2.—The abolition of all Wet Middens.

3.—The condemning of all Pump Water.

4.—The Purification of the Sewage Effluent.

5.—The Registration and Proper Control of the Milk Supply.

A. B. CHAMBERS, M.D., M.C.H.,
Medical Officer of Health.

January 17th. 1899.